ISSN (print) 0093-4666 © 2014. Mycotaxon, Ltd. ISSN (online) 2154-8889

MYCOTAXON

http://dx.doi.org/10.5248/129.149

Volume 129(1), pp. 149–152 *July–September 2014*

Two new species of *Xylaria* and *X. diminuta* new to China

Gu Huang[1, 2] Lin Guo[1*], & Na Liu[2]

[1]*State Key Laboratory of Mycology, Institute of Microbiology, Chinese Academy of Sciences, Beijing 100101, China*

[2]*Henan University of Technology, College of Biological Engineering, Zhengzhou 450001, China*

* Correspondence to: *guol@im.ac.cn*

Abstract —Two new species, *Xylaria beilschmiediae* on fallen fruit of *Beilschmiedia percoriacea* (*Lauraceae*) and *Xylaria foliicola* on dead leaves, are described. *Xylaria diminuta* is new to China. All specimens were collected from Yunnan Province in China.

Key words —*Ascomycota,* pyrenomycetous fungi, *Xylariaceae,* taxonomy

Four fruit-inhabiting *Xylaria* species have previously been recorded in China: *X. byttneriae* G. Huang et al., *X. culleniae* Berk. & Broome, *X. ianthinovelutina* (Mont.) Fr., and *X. liquidambaris* J.D. Rogers et al. (Teng 1963, Tai 1979, Rogers 1979, Huang et al. 2014). In this paper we describe two new *Xylaria* species and report *X. diminuta* as a new record from China.

Xylaria beilschmiediae G. Huang & L. Guo, **sp. nov.** Figs 1–3

Fungal Name FN570101

Differs from *Xylaria himalayensis* in its perithecia immersed within a stroma, overlain with dark brown outer peeling layer.

Type: China, Yunnan, Jinghong, Guanping, alt. 870 m, on fallen fruit of *Beilschmiedia percoriacea* C.K. Allen (*Lauraceae*), 18.X.2013, G. Huang, L. Guo & W. Li 285 (HMAS 269888, **holotype**).

Etymology: From *Beilschmiedia,* the genus of the plant serving as a substrate.

Stromata cylindrical, unbranched, with a sterile apex, 12–25 × 1–2 mm, fertile parts 3–10 mm long, on pubescent stipes; surface blackish, immersed perithecia, overlain with dark brown outer peeling layer, with perithecial mounds; interior white. Perithecia subglobose or ellipsoid, 330–500 µm diam; ostioles papillate. Asci with eight ascospores arranged in uniseriate manner, cylindrical, 138–165 µm total length, 6–8 µm broad, the spore-bearing parts 75–88 µm long, with an

apical ring staining blue in Melzer's iodine reagent, hat-shaped, 3–4 μm high, 2–3 μm broad. Ascospores brownish or brown, ellipsoid-inequilateral, smooth, (11–)12–14 × 4–5(–6) μm, with straight germ slit much less than spore-length.

Comments: *Xylaria beilschmiediae* is similar to *X. himalayensis* Narula & Rawla, which differs in producing stromata with protruding perithecia, in lacking an outer peeling layer, and which occurs on dead angiosperm fruits (Narula et al. 1985).

Xylaria foliicola G. Huang & L. Guo, **sp. nov.** Figs 4–6

Fungal Name FN570102

Differs from *Xylaria hainanensis* in its vertically cracked stromal surface and hairless plicate stipes.

Type: China, Yunnan, Jinghong, Dadugang, alt. 1250 m, on dead leaves, 20.X.2013, G. Huang, L. Guo & W. Li 259 (HMAS 253028, **holotype**).

Etymology: The epithet refers to the substrate (leaves) that the fungus inhabits.

Stromata cylindrical, unbranched, occasional branched, with a sterile greyish apex, overall 23–35 mm × 1–2 mm, fertile parts 7–18 mm long, on plicate stipes; surface black, overlain with outer peeling layer, with perithecial mounds; interior white. Perithecia subglobose or ellipsoid, 400–650 μm diam; ostioles papillate. Asci with eight ascospores arranged in uniseriate manner, cylindrical, 120–137 μm total length, 5–9 μm broad, the spore-bearing parts 56–68 μm long, with an apical ring staining blue in Melzer's iodine reagent, inverted hat-shaped, 2–3 μm high, 1.5–2.5 μm broad. Ascospores brownish or brown, ellipsoid–inequilateral, smooth, (8.5–)9–11 × 4–6 μm, with straight germ slit along the length of the spore.

Comments: *Xylaria foliicola* is similar to *X. hainanensis* Y.F. Zhu & L. Guo, which differs in having smooth stromata without vertical cracks on the surface, tomentose stipes, shorter asci (65–70 μm overall with 35–45 μm long spore-bearing parts; Zhu & Guo 2011).

Xylaria diminuta F. San Martín & J.D. Rogers, Rev. Mex. Micol. 13: 63, 1998. Figs 7–8

Stromata cylindrical, unbranched (occasionally branched), with a sterile apex, overall 12–40 mm × 0.8–1 mm, fertile parts 12–14 mm long, on plicate stipes; surface black, smooth, with perithecial mounds; interior white. Perithecia subglobose or ellipsoid, 270–430 μm diam; ostioles papillate. Asci

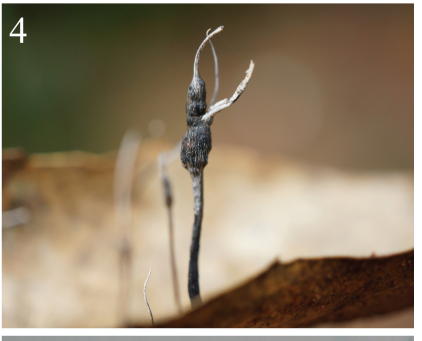
---

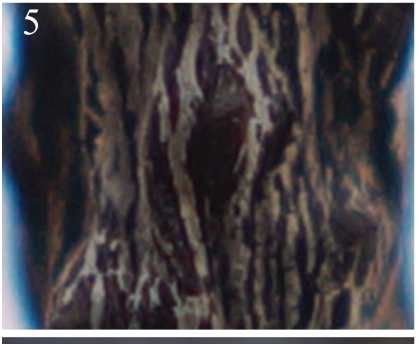
Figs 1–3. ***Xylaria beilschmiediae*** (HMAS 269888, holotype). 1. Stromata on fruit; 2. Stromatal surface; 3. Asci and ascospores. Figs 4–6. ***Xylaria foliicola*** (HMAS 253028, holotype). 4. Stromata on dead leaf; 5. Stromatal surface; 6. Asci and ascospores. Figs 7–8. ***Xylaria diminuta*** (HMAS 269887). 7. Stroma on dead leaf; 8åœ. Asci and ascospores.

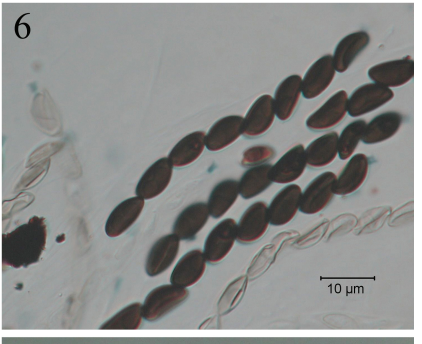
1

2

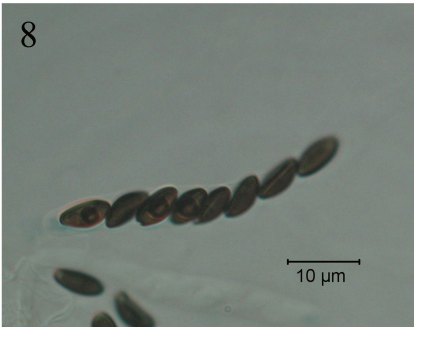
3
10 µm


4


5


6
10 µm

7


8
10 µm

with eight ascospores arranged in uniseriate manner, cylindrical, 73–82 μm total length, 4–6 μm broad, the spore-bearing parts 32–45 μm long, with an apical ring staining blue in Melzer's iodine reagent, rectangle, 1.5–2 μm high, 1–1.5 μm broad. Ascospores brownish or brown, ellipsoid–inequilateral, smooth, (5.5–)6–8 × 3–3.5(–4) μm, with straight germ slit spore-length.

Specimen examined: CHINA, Yunnan, Jinghong, Dadugang, alt. 1250 m, on dead leaves, 20.X.2013, G. Huang, L. Guo & W. Li 254 (HMAS 269887).

Remarks: The Chinese specimen agrees morphologically with the original description of *Xylaria diminuta*, except that the type specimen has shorter (5–13 mm) stromata and a shorter apical ring (1–1.3 μm long; San Martín et al. 1998).

Acknowledgements

The authors would like to express their deep thanks to Prof. Anthony J.S. Whalley (Liverpool, UK) and Dr. L. Vasilyeva (Vladivostok, Russia) for serving as pre-submission reviewers, to Dr. Shaun Pennycook (Auckland, New Zealand) for nomenclatural review, and to Prof. Zhenyu Li (Institute of Botany, Chinese Academy of Sciences) for identifying the host plant. This study was supported by the foundation of Project of the Knowledge Innovation Program of the Chinese Academy of Sciences (No. KSCX2-EW-Z-9).

Literature cited

Huang G, Guo L, Liu N. 2014. *Xylaria byttneriae* sp. nov. from Yunnan Province in China. Mycosystema 33: 567–570.

Narula AM, Rawla GS, Kaushal SC. 1985 ["1984"]. Two new species of *Xylaria* (*Pyrenomycetes*) from India. Willdenowia 14(2): 409–411.

Rogers JD. 1979. *Xylaria magnoliae* sp. nov. and comments on several other fruit-inhabiting species. Can. J. Bot. 57: 941–945. http://dx.doi.org/10.1139/b79-115

San Martin, Rogers JD, Lavin P. 1997. Algunas especies de *Xylaria* (*Pyrenomycetes, Sphaeriales*) habitantes en hojarasca de bosques mexicanos. Rev. Mex. Micol. 13: 58–69.

Tai FL. 1979. Sylloge Fungorum Sinicorum. Science Press, Beijing. 1527 p.

Teng SC. 1963. Fungi of China. Science Press, Beijing. 808 p.

Zhu YF, Guo L. 2011. *Xylaria hainanensis* sp. nov. (*Xylariaceae*) from China. Mycosystema 30: 526–528.